FIG. 1.—GENERAL VIEW OF THE MOSQUE FROM THE SOUTH-EAST.

THE GREAT MOSQUE OF THE OMEIYADES, DAMASCUS.

By R. Phenè Spiers [*F.*], F.S.A.

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IN the year 1866, when I visited Damascus, I was travelling with a French "Grand Prix de Rome," M. Emanuel Brune; and through the instrumentality of the French Consul, who had considerable influence at Damascus at that time, we obtained a special permission to draw within the Mosque. The French Consul was kind enough to lend us his dragoman, and with a guard of six soldiers to keep off the true believers, who objected to our presence, and who, if I remember rightly, were all blind men, we drew for two whole days in the great transept and the court. I have been informed since that such permission was quite exceptional, owing to the intense fanaticism in the city.

My drawings remained in my portfolio till the beginning of 1894, when I first heard of the great fire which had taken place on 14th October 1893. Thinking that the principal drawing I had made of the great transept might be of some interest, I sent it to the Editor of *The Builder*, with a short description, and it was published on 20th April 1894. Its publication led to a discussion on the existing buildings, and as to whether any portion of them formed part of the Church of St. John, said to have been built by Arcadius in 405, and transformed into a mosque, with various additions, by the Moslem Khalif al Walid in 705.

The site was originally occupied by a Roman temple, surrounded by a temenos or colonnaded enclosure. This temple was appropriated by Theodosius, and transformed into a church, dedicated to St. John, in the middle of the fourth century. At the commencement of the fifth century, Arcadius, his son, is said to have enlarged it—to what extent is not known. At all events, on the taking of Damascus by the Saracens, in 634, the church was sufficiently large to be divided into two parts, the Moslems taking the eastern half, and the Christians

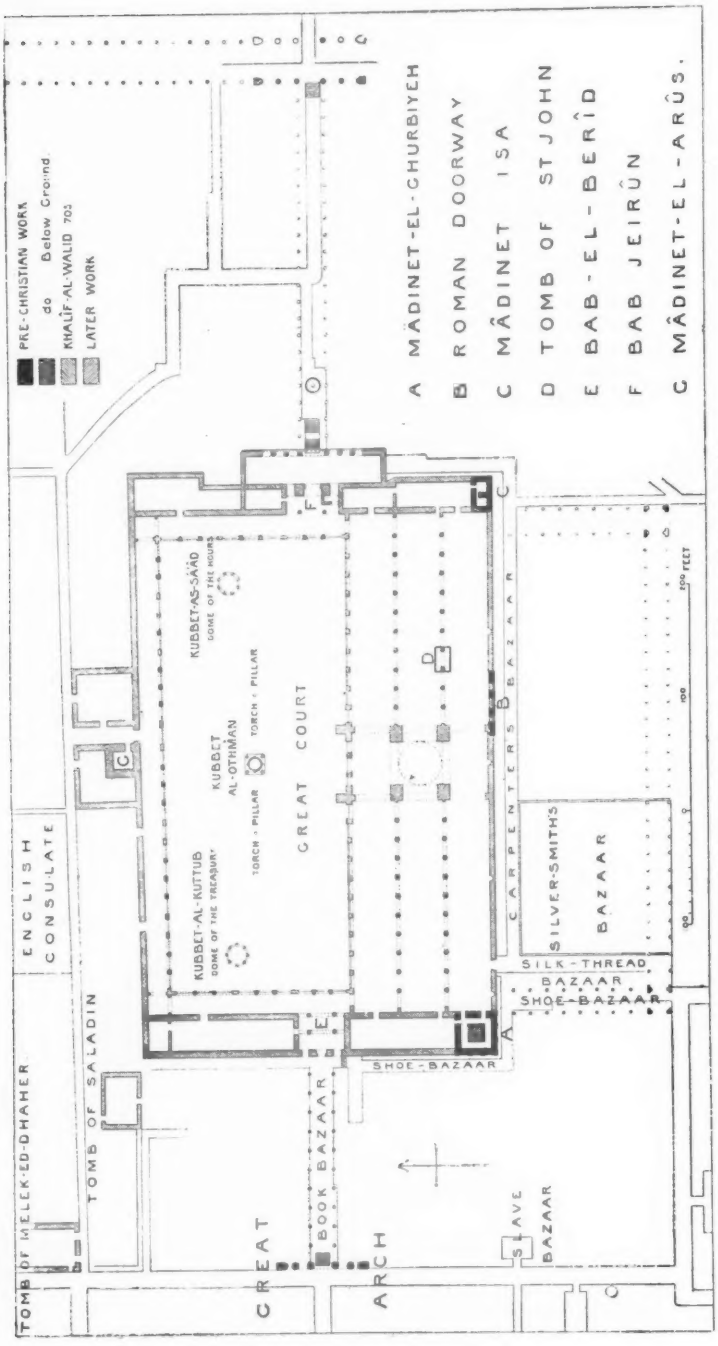

FIG. 2.—THE GREAT MOSQUE OF THE OMEYYADS, DAMASCUS. PLAN.

retaining only the western half, both entering, however, by the same great doorway [fig. 13, p. 34], which still exists, of the Roman temple.

The discussion above referred to led me to examine more carefully the plans of the Mosque which had been published, and which I found to be either incomplete or inexact. The most trustworthy plan was that published in Fergusson's *History* in 1874, taken from measurements made by Mr. (now Sir) Charles Wilson. This, however, did not include the outer walls, or the various approaches which it was necessary to obtain in order to trace the remains of Arcadius's church, and other Greek, Roman, or Christian buildings. In this I was assisted by the plan and description given by the Rev. J. L. Porter in his work entitled *Five Years in Damascus*, published in 1855. Mr. Porter states that the greater part of the measurements from which his plan was constructed was given him "by M. Antón Bulad, who obtained them from a Christian employed

by the authorities a few years ago to repair the interior of the Mosque, and who was not content with a general plan, but measured every pillar and pier in the place." Notwithstanding that care, the photographs proved it to be incorrect in many particulars. Porter's description was derived from a MS. written by a celebrated historian of Damascus, Ibn' Asâker, prior to 1193; from Ibn' Kethir, also a native historian, who wrote the work *El Badâyat w'en Nahâyat*, 1396; and from other Moslem authors. It was from a perusal of Ibn' Asâker's work that Mr. Porter was led to explore the exterior colonnades and triumphal arches; and in his plan those portions blacked in are the walls and columns he saw, others being in houses, or enclosed in modern walls to which he was unable to obtain access. Of the Mosque itself, and the vicissitudes to which it has been subject since the eighth century, I owe my chief information to the admirable translation of the works of the Mediæval Arab geographers made by Mr. Guy Le Strange, and published for the Committee of the Palestine Exploration Fund in 1890.

My best course will probably be to describe, first, the actual buildings of the Mosque and their adjuncts as they existed prior to the fire in 1893; then to give a brief sketch of the history of Damascus so far as it relates to these buildings; to follow with a research into the dates and original plan of the earlier remains, part of which will necessarily be speculative; and finally to give some account of the damage done by the last fire—for the conflagration of 1893 is the third large fire which has taken place since 705, when the Mosque was built by the Khalif al Walid.

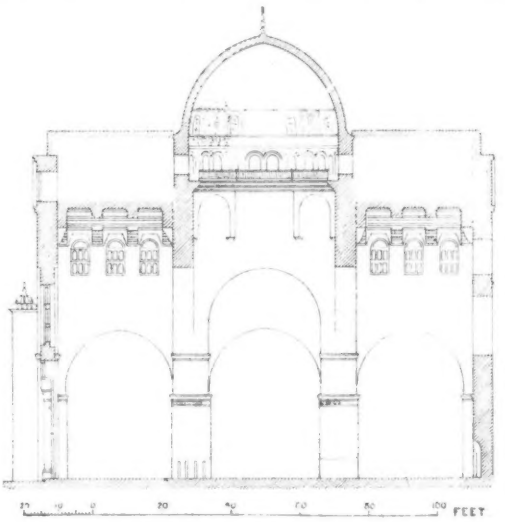

FIG. 3.—NORTH AND SOUTH TRANSEPTS AND CROSSING.

I will begin my description with the Mosque itself. The main building runs east and west, and is built in between two towers at the south east and south-west corners respectively. It measures internally 446 feet by 123 feet. Exactly in the centre is an immense transept, running north and south, with a dome over the crossing; and on each side, viz. to the east and west respectively, a nave and aisles, or, more correctly speaking, three aisles (for the three divisions are of equal dimensions), each aisle being 180 feet long. On the north side is a court of the same length as the Mosque, and 160 feet from the north transept wall to the rear wall of the arcade which surrounds the court on three sides. The north wall and arcade are not parallel to the Mosque, the east wall and arcade being ten feet longer than those on the west. The two principal entrances to the court are on the east and west sides, by triple gateways with bronze doors. There is a third entrance on the north side. There are three minarets to the Mosque, one on the north side, supposed to be the oldest, and erected by the Khalif al Walid, the builder of the Mosque; and two others at the south-east and south-west corners respectively, built on the two towers before referred to. The great piers of the transept measure, exclusive of the casing, 13 feet by 10 feet. They are not, however, equidistant, being 32 feet apart from north to south, and 39 feet 6 inches from east to west. The transverse arches on the north and south sides of crossing are set back 3 feet 9 inches, so as to obtain above a perfect square

of 39 feet 6 inches. The angles of this square are vaulted over with squinch pendentives [fig. 6], above which runs a gallery, a portion of which is corbelled out. Above this rises the dome with two ranges of windows, one in the drum, the other in the dome. The dome is, I think, of stone, and covered with lead.

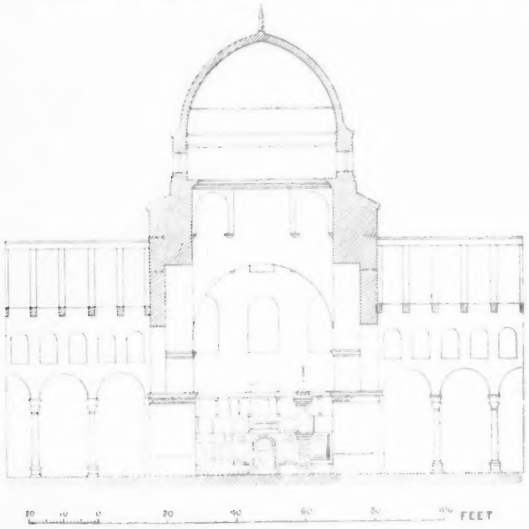

FIG. 1.—SECTION THROUGH NAVE AND CROSSING.

The north and south transepts have flat ceilings carried on beams [figs. 3 and 6] supported on corbels, all richly carved, painted in brilliant colours, and gilded. The dome, I should have said, is badigeoned in colours, which suggest a restoration of this century. The transept is lighted by the windows in the dome, by a range of windows in the north and south walls (in the former running above the triple arcade which forms the principal entrance to the Mosque), and by windows in the east and west walls, partially, however, blocked up by high-pitched roofs over the nave and aisles [fig. 5]. The nave and aisles, or the triple aisles, on the east and west sides of the great transept, are divided by an arcade of eleven bays, with columns taken from some more ancient edifice, raised on pedestals, and surmounted by ancient capitals and by dosserets. The dosseret is of Byzantine origin, and consists of a cubical block placed above the capital to carry a wall of greater thickness than the diameter of the columns. Above the arcades the walls are pierced with semicircular arched openings [fig. 4]. These open out into the side aisles, which are of the same height as the central aisle, the whole device being rendered necessary by the desire to give greater height to the structure than the columns afforded. A similar expedient was adopted in the Mosque of Cordova, in Spain.

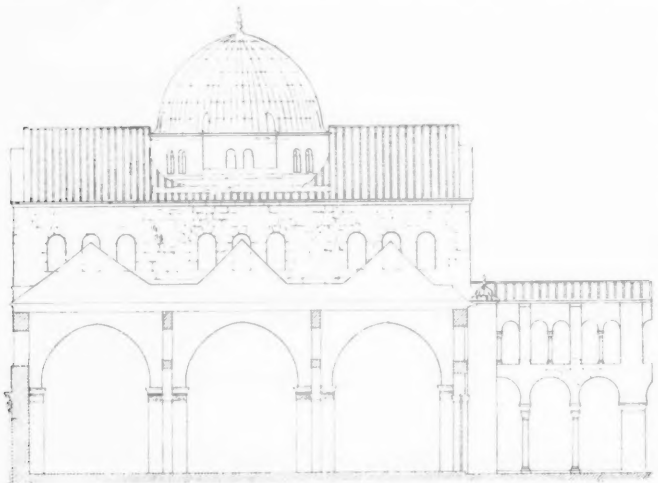

FIG. 5.—SECTION ACROSS THE EAST AISLES, SHOWING EAST WALL OF TRANSEPT.

I might here point out, while speaking of the arcades which divide the aisles, that it is the custom in mosques to run the arcades at right angles to the Mecca wall. The Mecca wall is a wall which runs at right angles to a line drawn in the direction of Mecca, and one or more niches are provided in this wall to point out to the true believer the direction he has to face when saying his prayers. This custom was

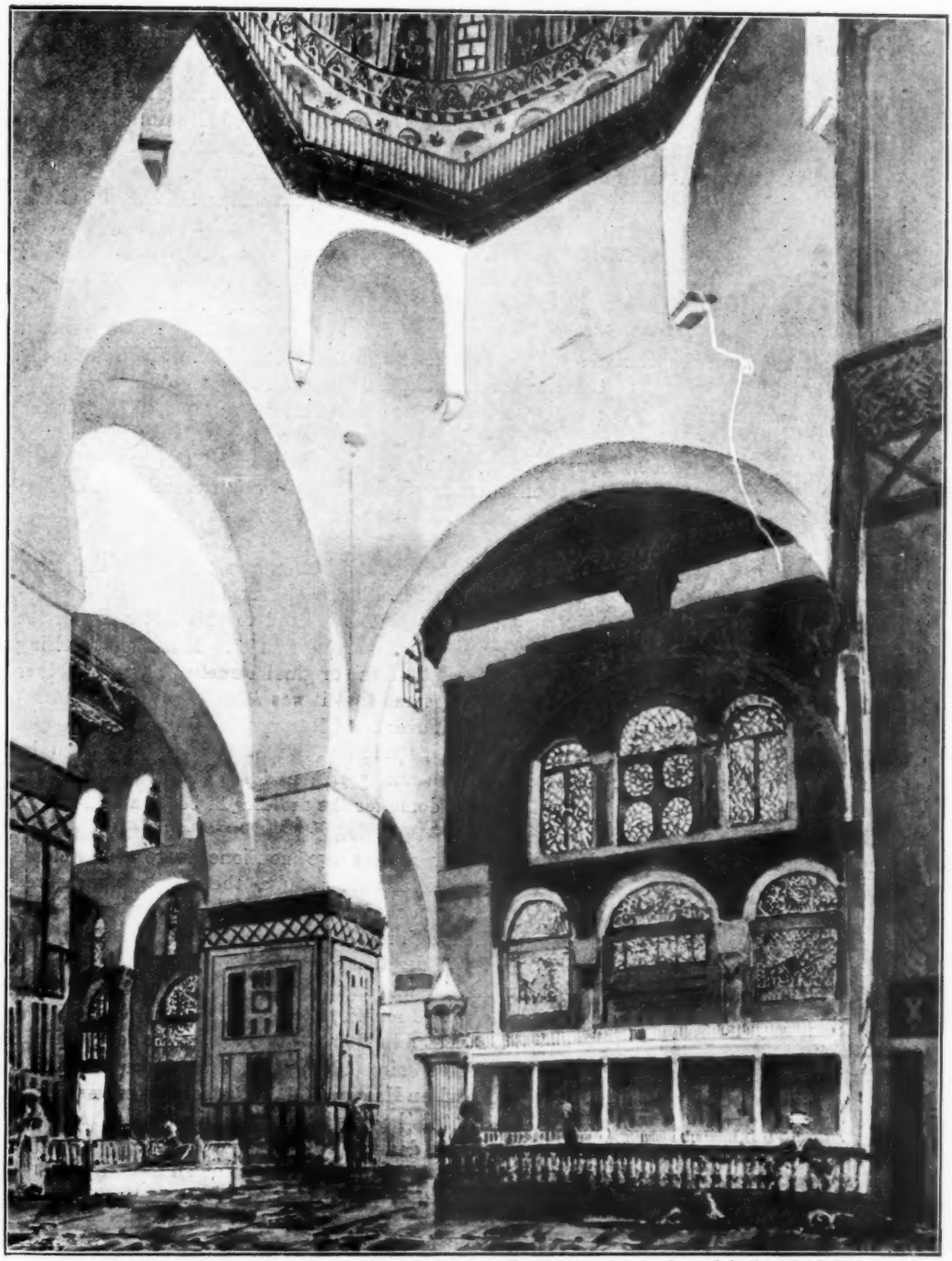

FIG. 6.—VIEW OF THE DOME ON CROSSING FROM SOUTH TRANSEPT. From a water-colour drawing made by the author in 1866.

insisted on by the late Mr. Carpenter when he read his Paper on the Great Mosque of Cordova;* and the fact that at Damascus these arcades run parallel with and not at right angles to the Mecca wall has probably led many to look upon the east or west wing of this Mosque as the original Church of St. John built by Arcadius. But there are exceptions to this custom, a notable one being the Mosque of Touloun at Cairo, built A.D. 877. It is evident, however, that in this latter case the architect decided to take advantage of the resistance to thrust which was afforded by the outer walls. In the Mosque of Amru, and in other mosques where the arcades run at right angles to the Mecca wall, all the arches have to be tied-in at the springing with wooden beams, which give a very ephemeral appearance to the structure, and in case of fire would at once destroy the whole building. Having immense piers to his transept, and thick walls at the east and west ends, Al Walid apparently allowed his Byzantine architects to carry the arcades from the piers to the east and west walls. The three aisles of the eastern and western wings were (probably in the fifteenth century) roofed with high-pitched open timber roofs covered with lead, masking the original windows in the east and west walls of the transept. The destruction by fire of these roofs has revealed the fact that not only were there windows on each side in the north and south transepts, but also in the crossing; and as these windows rise above, and are internally masked by, the great arches which carry the central dome, it proves conclusively that the dome and the arches which carry it were afterthoughts, and not at first contemplated. This circumstance perhaps also explains the peculiar arrangement of the arches. The transept as built was wider than the central aisle, but as it was deemed necessary to have a square centre, across the angles of which the squinches were to be thrown, this could only be obtained by setting back the north and south arches. The thickness of the north and south arches carrying the squinch pendentive is 7 feet, whereas that of the east and west is 9 feet, and to this latter dimension must be added the thickness of the original wall, 5 feet, making 14 feet. Mukaddasi, writing in 985 A.D., mentions the dome as if it formed part of the original structure; and, no other Khalif being cited as having added it, we must assume that it was Al Walid's work, but conceived and built by some of the workmen brought over from Byzantium. On the completion of the main building, skilled workmen from Persia, Byzantium, and India were employed by Al Walid on the mosaics, which occupied them seven years, and some of the Byzantine workmen might have suggested the erection of a dome for the mosaics, it being a well-known traditional form.

The trusses of the high-pitched open timber roofs above mentioned were placed closer than usual in such roofs, viz. 8 feet 3 inches centre to centre; and as the tie beams measured about 26 inches by 20 inches, not much of the open roof was visible. The four great piers of the transept and the south wall were encased with marbles enriched with arabesque inlays and borders of mosaic up to a height of 20 feet. In the centre of the south wall was the principal mihrâb [fig. 7], or Mecca niche, and this was enriched with tier above tier of small arcades of marble with inlays of mother-of-pearl and mosaic, the semidome of the niche being decorated with diagonal coffering similar to that found in Roman buildings. The design of this mihrâb resembles that of the Kalaoon Mosque at Cairo (1287); and the slender Corinthian columns on the west side, those of the mihrâb in Sultan Hassan (1361). Portions, however, of the lower part are so Byzantine in style as to suggest its having been the original mihrâb restored only after the fires of 1069 and 1400. The shell decoration in the tympanum of the lower range of arcades is similar to that which is found in the famous Ambo of Thessalonica, attributed to the end of the fourth century, so that this may be a relic of Arcadius's church

* *The Mosque-Cathedrals of Cordova and Seville, and some contemporary Arabic Buildings.* By R. Herbert Carpenter.—TRANSACTIONS 1882-83, p. 101.

transported to its present position. The inner wall of the north transept still preserves portions of the mosaic decoration of the eighth century [fig. 6], with which all the upper part of the walls and the dome were once covered.

The two wings of the Mosque are lighted by ranges of windows in the north and south walls, of the same size, and occupying almost the same position, as the openings already referred to as over the arcades dividing the three aisles. They, as well as the tympana of the arcades below on the north side, are fitted with pierced arabesque designs in stucco filled with coloured glass. These windows are known in the East as "kamariyas," or "shemsiyas." There are

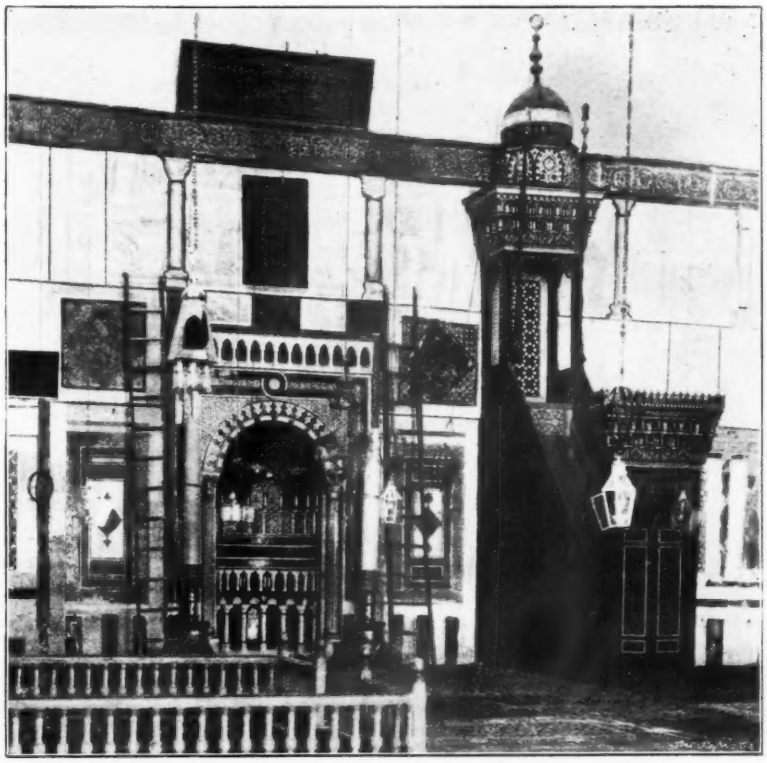

FIG. 7.—THE MIHRÂB AND MIMBAR AT SOUTH END OF TRANSEPT.

many examples in the South Kensington Museum, and they have already been described in the Papers read on *The Arab House of Egypt*.* Ibn-Jubair, an Arab author, whose writings will be referred to later on, says "the upper parts of these" (viz. the tympana of the arcades on the north side) "are ornamented in plaster, that is, stamped out even as is the work in the windows."† There are on the north front on each side of the transept eleven arcades corresponding with those of the aisles; they are, however, carried on square piers, and the openings are fitted with framework and doors. It is said that originally these arcades were carried on columns, so that virtually the Mosque was open to the court; in other words, that

* *The Arab House of Egypt.* By Count R. d'Hulst. With notes by R. Phené Spiers and J. D. Crace.—TRANSACTIONS, Vol. VI. N.S. 1889-90, p. 221.

† Similar stucco-work fills the north and south windows of the transept.

the columns have been encased with masonry. I cannot find any authority for this, except that Ibn-Jubair speaks of fifty-four pillars free-standing; and as there are only forty columns in the

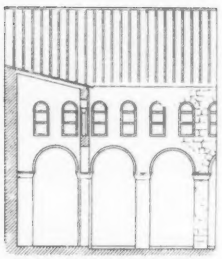

FIG. 8.—NORTH-EAST ANGLE.

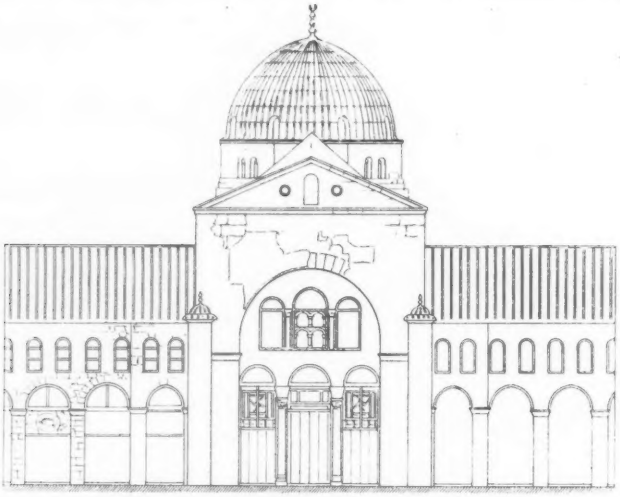

FIG. 9.—NORTH FRONT OF MOSQUE FACING COURT.

two wings, and two in the north transept, there are still twelve to account for. Of the twenty-four square piers of these arcades, two are connected with the portico round the court, and two form part of a thicker wall which extends one bay to east and west of transept. Twelve of the sixteen piers remaining may have originally been columns: but there is no evidence of this in the actual piers, which look like solid masonry, and are quite unlike the encased piers of the arcade of the court to which I shall refer further on. The greater thickness of the north wall to which I have just referred must be looked upon, I think, as a sort of buttress to the arched recess of the north transept, especially as the arcade on each side is narrower by two feet than any of the others. At first I thought it suggested an earlier construction, but all the joints are carried through.

The great court on the north side is surrounded by a lofty arcade the design of which is similar to the arcades and superstructure within the church, except that the columns are alternated with piers irregularly, there being sometimes three, sometimes two columns between the piers; and in three cases, opposite doorways in rear wall, the piers come together. Instead of the two openings above the arcade [fig. 4] they are coupled together with a shaft in the centre [fig. 10]; but they open into the great portico the roof of which is constructed of beams exposed to view, and painted and decorated. Of the forty-seven free-standing pillars cited by Ibn-Jubair, eleven have been

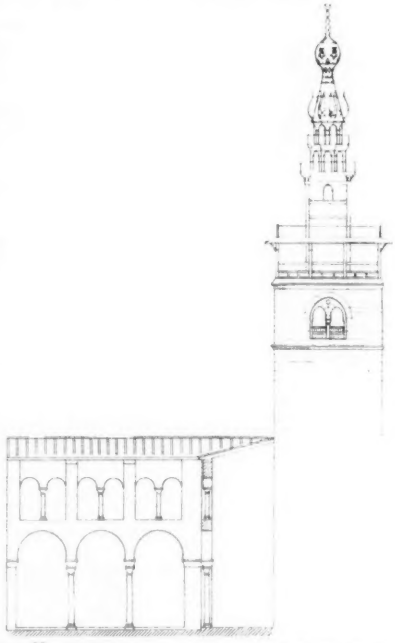

FIG. 10.—ARCADE OF COURT AND MINARET OF THE BRIDE.

encased, some, as Mr. Porter states, within the last century. These are all covered with stucco, stamped with arabesque patterns.

Externally, the Mosque is of the simplest design: the walls are all built in ashlar masonry, with stone courses 2 feet 9 inches in height; the windows are all circular-headed, with from five to seven voussoirs, according to the size. The transept rises thirty feet above the walls of the two wings, and has a low-pitched gable at the north and south ends, with a single bold ogee moulded cornice. There is a vertical straight joint at each end of the south front, where the Mosque was built up against the earlier towers. In consequence of the heads of the windows being circular, a Christian origin has been ascribed to them. But it must be remembered, first, that Al Walid, to whom the entire building of the Mosque is ascribed (705–712), employed Christian workmen from Byzantium; and, secondly, at that period the pointed arch had not been generally introduced. The earliest distinctly pointed arch known in Mohammedan buildings is that found in the Nilometer at Cairo, dated, according to Mr. Lane, A.D. 861, sixteen years earlier than the Great Mosque of Touloun at Cairo, where the arches are horseshoe as well as pointed. There are two variations found, however, in early Syrian architecture: the arches are stilted sometimes and slightly horseshoe, or they are struck from two centres having a keystone in which the point is rounded off. This is found in the great arches of the transept; the springing is 26 inches above the impost, and the centres are 30 inches apart. Similar arches are found in the Church or Mosque of Rabbath-Ammon, in Moab, dating from about the beginning of the seventh century; and in the Kubbet Es-Sakra, or Dome of the Rock, at Jerusalem, A.D. 686. In the centre of the transept, and rising above the roof, are two or three courses of stone, which probably carried the original dome built by Al Walid. The existing drum and dome were built probably after the fire of 1400.

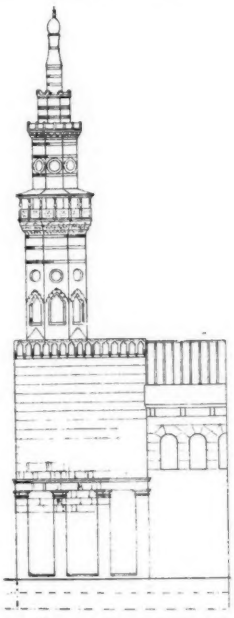

FIG. 11.—THE WESTERN MINARET.

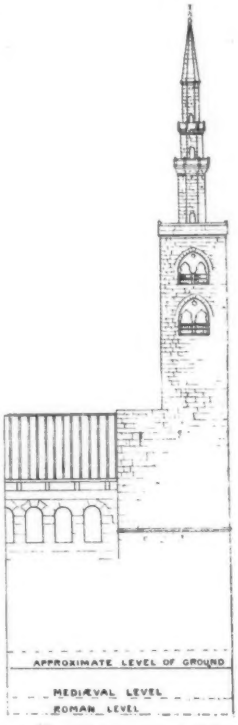

FIG. 12.—THE MINARET OF JESUS.

The minaret on the north side of the Mosque, known as the Mâdinet al 'Arûs (the Minaret of the Bride, fig. 10), is the most ancient, and is ascribed to Al Walid (705-12), though it has probably been restored since. It is square, with a gallery round the central minaret. The Mâdinet 'Isâ (the Minaret of Jesus, fig. 12), 250 feet high, stands at the south-eastern angle. This and the Mâdinet el Ghurbiyeh (the Western Minaret, fig. 11) are built on towers of more ancient date, which are said by Ya'kûbi (writing in 891) to have been "originally watch-towers in the Greek days, and belonged to the Church of St. John." The western tower, however, is much earlier than this, and is probably the earliest structure in Damascus. To this I shall refer again. The minaret which surmounts it is octagonal, and is set back on the north-west angle of the tower.

The principal entrances to the Mosque are the triple gateways with bronze doors, on the east and west sides, which lead into the great court. The east gate, known as the Bâb-el-

Jeirun, leads to a vestibule with two columns, and was preceded by a lofty arcade with six columns: these are shown in Porter's plan, but they fell down in 1858. The west gate, Bab-el-Berid, leads into a vestibule with four columns, and in both cases into the arcade of the great court. There is a north entrance of less importance by the side of the Minaret of the Bride [fig. 10], and an entrance known as the "Gate of the Addition" at the south-west end of the Mosque.

In front of the east and west gates there existed a double colonnade, the remains of which can still be traced, built in the shops by the side. The east colonnade was 312 feet long, the west 184 feet. At the west end of the latter there exist the remains of a magnificent portico of four columns, and two three-quarter responds and angle piers. The columns are four feet in diameter, and the width is about eighty-four feet. The two centre columns are wider apart than the others, and are spanned by an arch round which the entablature is carried, similar to the well-known example of the Palace of Diocletian at Spalato. Half of the pediment above the arch and the springing of the latter still exist.

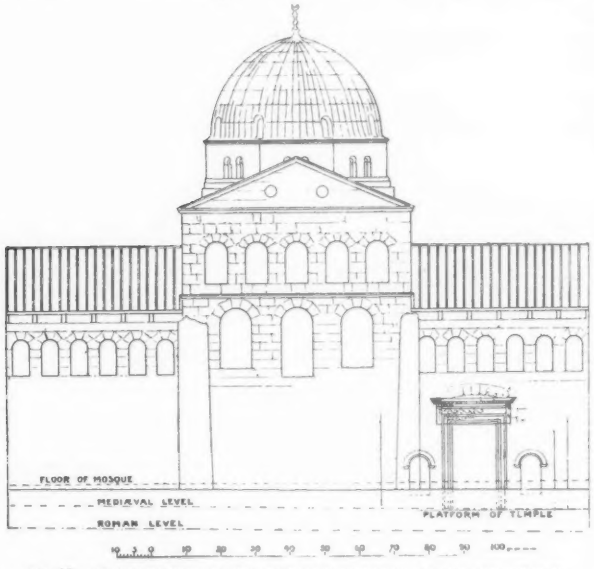

FIG. 13.—CENTRE OF SOUTH FRONT, SHOWING THE ORIGINAL ROMAN DOORWAY OF TEMPLE.

At the east extremity of the eastern colonnade there existed, according to Arab authors, a similar portico. This was pulled down in 1223, and the materials used to pave the court of the Mosque. Mr. Porter found three of the lower portions of the columns; their diameter being 5 feet would give a length of 100 feet to this portico. To these features I shall return again.

Returning for a moment again to the Mosque, I have still to mention an important fragment of an ancient wall which is incorporated with and forms part of the south wall of the Mosque. In a line about eighteen feet east of the east wall of the transept is the axial line of one of those magnificent doorways such as are found in the Roman temples at Baalbec, Palmyra, and other places in Syria. This doorway [fig. 13] measures from 10 to 12 feet wide in the clear, and double that in height: it has richly carved architraves, frieze, and cornices carried on boldly projecting corbels on each side. It is on the lower fascia of this doorway that the well-known Greek inscription has been carved, and which exists to this day, notwithstanding the Mohammedan use of the building for twelve centuries, the translation of which is, "Thy kingdom, O Christ, is an everlasting kingdom, and Thy dominion endureth throughout all generations." * This doorway is, according to Mr. Porter, flanked by two other doorways, one on each side, with circular heads. Such a design would be so unnatural in a Roman temple that I am inclined to think those two side entrances must have been originally niches, which were cut through by the Christians when they turned the temple into a church, and, according to the Greek rite,

* This is the Septuagint version of Psalm cxlv., verse 13.

required three doorways. There is a basilica of the second or third century at Chagga, with square-headed central doorway and circular-headed niches on either side, which occupy a similar position to those at Damascus.

So far I have dealt with the actual facts, with a description of the structure and its approaches as it exists, or existed prior to the great fire of 1893. Before entering into the speculative portion of my Paper it will be necessary to say a few words on the early history of Damascus, just so far as it related to the enclosure of the Mosque. My facts are chiefly taken from Murray, who probably derived a great portion of them from Porter's *Five Years in Damascus*; while Porter owed a good deal of his information to Ibn' Asâker, an Arab author. These have been supplemented by the admirable translation of other Arab authors made by Mr. Guy le Strange, and already referred to.

Damascus is one of the oldest cities in Syria; it was already a noted place in the time of Abraham, and it is often mentioned in Scripture. In B.C. 333 it fell into the hands of Alexander the Great, and afterwards it was divided between the Seleucidæ and the Ptolemies. About a century before the Christian era, in 114, Antiochus Cyzienus took the half of the kingdom of the Seleucidæ and fixed his residence at Damascus. In B.C. 84 Aretas, king of Arabia, took possession of the city; and in B.C. 64 it submitted to the Romans under Pompey, and the proconsul occasionally resided there. Aretas, the father-in-law of Herod Agrippa, seized Damascus about A.D. 37. During the reign of Trajan, A.D. 98–118, Damascus became a Roman provincial city; and Apollodorus of Damascus, the most celebrated architect of his time, who built the bridge across the Lower Danube, may possibly have carried out some of the work there. To the peaceful reign of Antoninus Pius who followed (138–61), and who was one of the greatest builders in Syria, we may ascribe the great arches at the east and west ends of the Mosque. To this monarch and to his successor, Marcus Aurelius Antoninus (161–80), we owe the principal temples and monuments at Baalbec, Gerasa, Palmyra, and other great Syrian cities erected under Roman rule. Damascus remained in the possession of the Romans till A.D. 260, when it was taken by Sapor I., the Sassanian king.

Some years after the accession of Constantine, and when Christianity became, in A.D. 323, the established religion, Damascus was constituted an episcopal centre, with fifteen dioceses. After this, for more than three centuries, the records are very scanty. The temple is said to have been converted into a church by Theodosius in 379, and, according to Mr. Porter, a stone was found near the Jeirûn gate stating, "This church of the blessed John the Baptist was restored by Arcadius, the son of Theodosius."

In 634 the town was taken by the Moslems, and the church divided equally between the Christians and the Moslems, the former occupying the west and the latter the east end. On the accession of Walid, the sixth Khalif of the Omeiyades, the whole edifice was appropriated by the Moslems, and, according to all the Arab authors, pulled down prior to the building of the existing Mosque.

These are the main historical facts connected with the history of the Mosque of Damascus. There are one or two other statements in the Arab authors translated by Mr. Guy le Strange, which give a clue as to the origin of certain names; and as Damascus, called in Arabic "Dimishk" or "Dimashk," has kept its name unchanged through all ages, so we may fairly assume that other denominations handed down through the Arabs have also some real foundation.

Mas'ûdi, in his work entitled *The Meadows of Gold*, written A.D. 943, says:—

Jairûn (after whom the eastern gate is named) was the son of Sa'ad, son of Ad, and he came to Damascus and made it his capital. He transported thither a great number of columns of marble and alabaster, and constructed thereof a lordly edifice, which he called Iram d'hât al Amûd, or Iram of the

Columns. In our own days, in the year A.H. 332 (A.D. 954), this same edifice is to be seen in the market, at the gate of the Great Mosque called Bâb Jairûn.

Of course he is wrong in his period, as the building referred to is Roman; but then he was probably no archæologist. Yâkût, writing 1225, says: "Damascus was founded by Dimashih, son of Kâni, great-grandson of Shem, son of Nûh;" and again: "Others say that Damascus was built by Jairun ibn sa'ad ibn Ad, grandson of Shem."

According to Porter, who quotes from Ibn' Asâker and other authors, the palace called Jeirûn was built by Ad, son of Uz, son of Aram, son of Shem. Ad had two sons, Jeirûn and Berîd; for these he erected the two castles which still bear their names. As regards the former, Ibn-Kethir says: "The great Roman pediment that stood in front of Bab Jeirûn was removed A.H. 601 (A.D. 1223), and the stones employed in paving the court of the Great Mosque."

The descriptions given of the Mosque by various Mediæval Arab geographers from the ninth to the fourteenth century are so clear and precise that we have henceforth no difficulty in tracing its history up to the year 1400, when the second great fire took place; and the plan measured by Sir Charles Wilson, and published in Fergusson's *History of Architecture*, and drawings and photographs made before and after the third fire in 1893, enable us to follow the changes which have, since 1400, taken place in the structure. The conclusion at which Fergusson arrived, viz. that "the materials which had first been collected for the temple and afterwards used for the church were entirely rearranged by the Mohammedans in the form in which we now find them," seems on all evidence to be correct.

In the first place, the precious fragment which still exists of the Roman Temple, with its magnificent doorway and two side doorways or niches, and which, owing to its sound condition and great thickness, the Khalif al Walid utilised to form part of the south wall of the Mosque, cannot be made to centre with any portion of the Mosque. According to Professor Hayter Lewis, the axis of the great doorway lies about eighteen feet to the east of the east wall of the central transept, on a line with the centre of the first column of the eastern nave. Portions of the west wall of the temple may have been utilised for the east piers of the transept. Supposing the dimensions of the temple also to have been the same as those of the temple at Palmyra, the north wall of the Mosque might have been built on the foundations of the rear wall of the temple; beyond this, it is impossible to trace the walls of the old temple in the present structure. Yâkût, writing in 1225, states that Al Walid instructed his workmen to search for the ancient foundations of the walls of the original building, showing that, if possible, he was willing to utilise these; this probably referred also to the enclosure of the court, the portico round which seems to be on the line of the ancient temenos.

In the second place, the Arab authors agree in the statement that, prior to the building of the Mosque, Walid destroyed the church. Ya'kubi, writing in 891, says: "The Christians sought to turn him from it" (viz. the destruction), but "he went up into the church, and there was a yellow dome there," and this he destroyed with his own hand, and the people pulled down other portions as he set the example.

Mas'udi (A.D. 953) says: "In the year A.H. 87 (A.D. 708) the Khalif al Walid began the construction of the Great Mosque of Damascus. He also gave orders to set an inscription in gold on lapis lazuli in the court of the Mosque, and it ran as follows: *Allah is our Lord, and we worship none but Allah. The servant of Allah, Al Walid, the commander of the faithful, has ordered the building of this Mosque and the destruction of the church which was here in former days. Set up in Dhu-l-Hijjah of the year* 87. These words, written in gold, may be seen in the Mosque of Damascus in these our own days * in the year A.H. 332" (A.D. 953).

* No trace of this inscription is to be found now.

Istakhrî, whose work was re-edited by Ibn-Haukal in 978, says, "When it came to the days of Khalif al Walid he built the Mosque." The same phrase is repeated in Idrisî's writing (1154).

The Spanish Arab, Ibn-Jubair, who visited Damascus in 1184, and whose description of the Mosque, as translated by Mr. Guy le Strange, is one of the most brilliant architectural descriptions ever written by a layman, states: "He," Al Walid, "would have given them another church in exchange; but the Christians would not agree, and they made objections

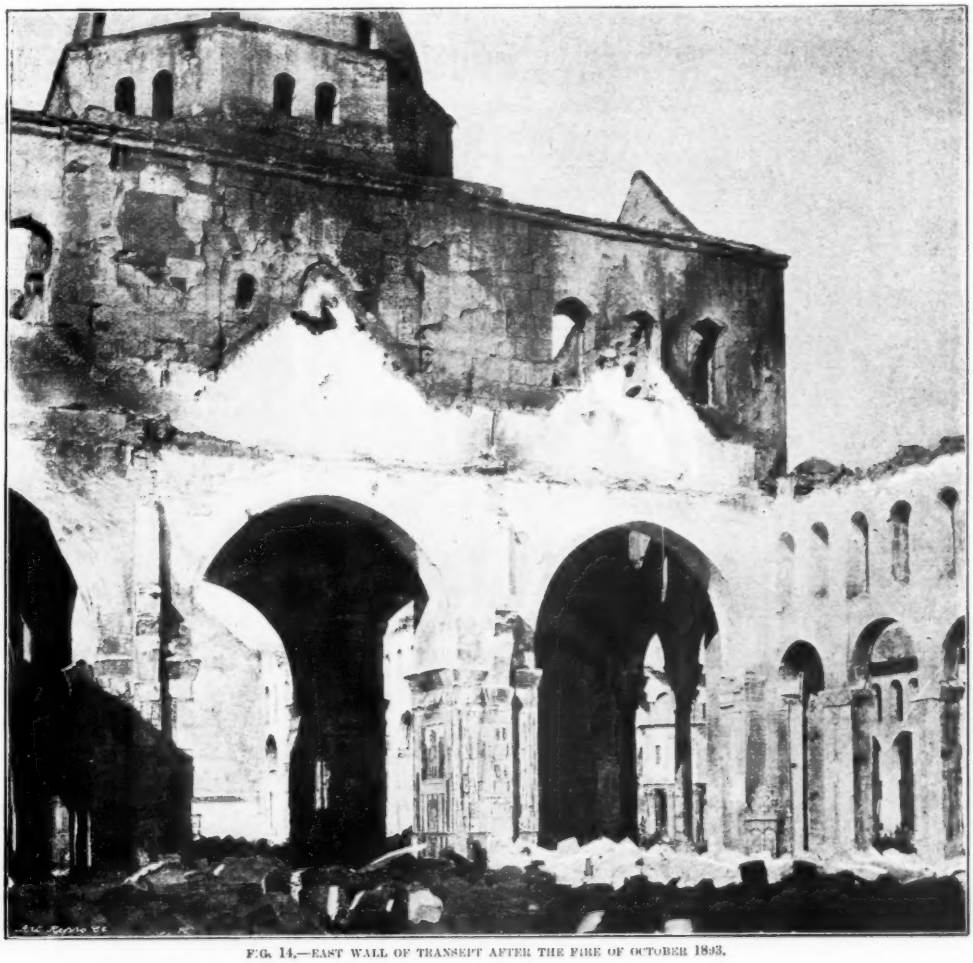

FIG. 14.—EAST WALL OF TRANSEPT AFTER THE FIRE OF OCTOBER 1893.

to the act of the Khalif, and forced him to take their church from them by force, and he himself began the work of demolishing the building," and "he began to pull down the walls with his own hands. Then the Muslims hastened to his aid, and very soon the whole was demolished."

Yâkût, writing in 1225, says, "Then cried out Al Walid unto them, 'I am he who will be the first to demolish it,' and standing up he began to demolish the yellow cupola which was above the place where he sat, and the Muslims around him did the like."

Kemal ed Din, A.D. 1470, writes: "The Khalif al Walid levelled the buildings of the Christians until the whole was one flat surface, and then built the Mosque."

Lastly, we have the evidence of the building itself, of which there exist still the north and south walls and the east and west walls of the transept above the roof. These are all clearly the work of one period, and agree in their construction with the description given by Mukaddasi in 985.

The great fires which have taken place since the building of the Mosque are those of 1069, 1400, and 1893. The photographs which have been taken since the last fire suggest the extent to which the building was damaged by the other two, and the description given by Mukaddasi in 985, and by Ibn-Jubair in 1184, enable us, when comparing them with the actual building, to judge of the alterations which have taken place in the main structure and the great north court since their first construction. Mukaddasi tells us:—

Its outer walls are built of squared stones, accurately set and of large size, and crowning them are splendid battlements. The columns supporting the roof of the Mosque consist of black polished pillars in a triple row,* and set widely apart. In the centre of the building over the space fronting the mihrâb [towards Mecca] is a great dome. Round the court are lofty colonnades [this should be arcades], above which are arched windows, and the whole area is paved with white marble. The [inner] walls of the Mosque, for twice the height of a man, are faced with variegated marbles; and above this, even to the very ceiling, are mosaics of various colours and in gold, showing figures of trees and towns and beautiful inscriptions, all most exquisitely and finely worked. The capitals of the columns are covered with gold, and the vaulting above the arcades is everywhere ornamented in mosaic. [This probably refers to the soffit of the arcades, the pillars could not have carried a vault, and he has already mentioned the ceiling.] The columns round the court are all of white marble, and the vaulting of the arcades [meaning the soffits of the arches] and the arched windows above are adorned with mosaic, with arabesque designs. The roofs are everywhere overlaid with plates of lead, and the battlements of both sides are faced with the mosaic work. . . . On the summit of the dome is an orange, and above it a pomegranate, both in gold; . . . but the most wonderful of the sights here worthy of remark is verily the setting of the various coloured marbles, and how the veining in each follows from that of its neighbour.

Ibn-Jubair, writing in 1184, gives a general description of the history of the Mosque as built by Al Walid, but curiously enough does not refer to the fire of 1069. He speaks in the past tense of the decorations; "all the walls," he says, "were overlaid with the mosaic work called Al Fusaifusâ." Some of this mosaic, which accords with the description given by Mukaddasi, still existed before the fire of 1893 in the north transept, and some more may have resisted the fire of 1069, so that he had some authority for his statement. "The four great piers under the dome are," he says, "made of the most exquisite marble set in with coloured stones in mosaic." But he does not refer to the marble lining of the walls up to twice the height of a man, as described by Mukaddasi, or to the actual panelling which still exists, twenty feet high. It is possible that this latter forms part of the restoration of the fifteenth century, with which its style would accord better. He enumerates in detail the measurements of the Mosque, and the number of its gates, windows, and columns, all of which are in close accordance with the actual buildings. He fails, however, to distinguish between columns, pillars, pilasters, and piers, so that it is not always easy to follow him, especially as it is said that some of the piers of the north aisle wall were originally columns which were encased when doors were provided to close in the Mosque on this side. His description of the court accords exactly with the present building, and the number of columns he quotes, "forty-seven, of which fourteen are pillars of gypsum," is the same that we find now, except that eleven of the columns have since been encased, some as late as the last century (Porter).

* This suggests pillars to carry the north wall of the Mosque.

The most interesting portion of his description is that which refers to the great dome over the crossing, and to internal domes, probably of a decorative nature only, over the north and south transepts. Mukaddasi speaks of one dome only in the centre: this may have been either of stone or timber; in either case we may assume that it succumbed to the fire of 1069, because Ibn-Jubair describes domes of a different character. The latter also dilates on the immense height of the great dome which "broods over the void; and the people have likened it to a flying eagle, the dome itself being the head, the aisle [meaning the north and south transepts] below being the breast, the half of the wall of the right aisle and the half to the left being the two wings of the eagle." This refers to the transept roof, which runs through from north to south with a low pitch, and is terminated by a pediment at each end.*

The reference to the three domes is thus described by Ibn-Jubair, A.D. 1194:—

A central nave is below it [viz. the central dome, the nave being what we should describe as the transept], going from the mihrâb [the Mecca niche] to the court; and over this nave [as seen from the interior] are three domes, namely, the dome which is close to the Mosque wall towards the court [north transept], the dome which is over and adjacent to the mihrâb [south transept], and the dome which is below [forming the inner or lower cupola of] the Kubbat ar Rasâs [the Dome of Lead], rising between the other two. [Later on he describes his visit to the interior of these two domes: he] went up by a ladder to the western colonnade that goes round the court, and walked on the flat roof of the Mosque. [This shows us that in the restoration after the fire of 1069, the roofs were still flat roofs.†] The roof [he goes on to say] is covered with large sheets of lead, the length of each sheet being four spans and the width three spans [span = nine inches]. After passing on the flat roof we came to the dome, and mounted into it by a ladder set there; and doing so it almost happened that we had been seized with dizziness. We went into the round gangway [this was round the base of the lead dome], which is of lead, and its width is but of six spans, so that we could not stand there, fearing to fall over. Then we hastened on to the entrance into the interior of the dome, passing through one of the grated windows which open in the leadwork, and before us was a wondrous sight. We passed over the planking of great wood beams which go all round the inner and smaller dome which is inside the outer leaden dome as aforesaid, and has one or two arched windows through which you look down into the Mosque below. From here the men who are in the Mosque look as if they were small children. The dome is round like a sphere, and its structure is made of planks strengthened with stout ribs of wood, bound with bands of iron. The ribs curve over the dome and meet at the summit in a round circle of wood. The inner dome, which is that seen from the interior of the Mosque, is inlaid with wooden panels. They are all gilt in the most beautiful manner, and ornamented with colour and carving. The great leaden dome covers this inner dome that has just been described. It also is strengthened by wooden ribs bound with iron bands. The number of these ribs is forty-eight, and between each rib is a space of four spans; the ribs converge above, and unite in a centre piece of wood. The great double dome rests on a circular base built of mighty blocks, above which rise short and thick pilasters, built up of large stones of a very hard kind, and between every two pilasters is pierced a window. Thus the windows extend all round the circle under the dome. Of the wonders of the place it is that we saw no spiders‡ in the framework of the domes, and they say there are none here at all.

The graphic description thus given of the inner and outer domes, and the fact that Ibn-Jubair dwells on the great height of the central dome, rising high above the roof, and known as the Kubbat al Nasr, the Dome of the Eagle, which is not referred to by Mukaddasi, would suggest that the first dome built by Al Walid was a single dome and of less height. It probably, in fact, occupied about the same position as the inner dome described by Ibn-Jubair.

* Mr. Guy le Strange states that the great dome is known to-day as the Kubbat al Nasr, the Dome of the Eagle.

† Before the fire of 1893 there were three high-pitched open timber roofs covered with lead, and the sun striking on this for some centuries must have so dried the wood that it is easy to understand how the workman's ignited tobacco, blowing under the lead, set the whole roof in a blaze at once.

‡ Due possibly to the fact that cedar from Lebanon was the wood employed.

In the restoration after the fire of 1069 the upper dome was raised on a drum, as described by him, with short and thick pilasters resting on a circular base of mighty blocks. This base, by the way (except that it is octagonal), still exists; that is to say, under the existing octagonal drum (which, with the dome over, was built, as far as we can judge by the style of its windows, in the fifteenth century, after the fire of 1400) there still remain three courses of stone of larger size, similar to the stonework of Al Walid's Mosque, and which may have formed the base of his dome.

It now remains to be considered to what extent the three fires damaged the original structure of Al Walid, and the photographs taken since the fire of 1893 enable us to form some estimate of the probable damage done in each case. The whole of the two rows of arcades, with windows pierced in the wall above, which divided the three aisles, have been thrown down in hopeless confusion; but, owing to the great solidity of the outer walls, and the fact that all the inner surface was protected with marble panelling below, and mosaic or plaster above, no harm would appear to have been done to the stonework. The east and west walls of the Great Transept were also coated with plaster, and there are traces on the east wall of painted decoration on the outside [fig. 14]. The position of the painted decoration, coming as it does between the gabled roofs just burnt down, so that it could not have been seen, suggests that these walls were plastered after the fire of 1069 in order to hide the damaged stonework; and we know that the whole of the internal walls of Al Walid's Mosque were covered with marble linings and mosaic, so that we may fairly assume the whole of the main construction to have withstood the fire of 1069 as well as that of 1400. As regards the arcades which divide the aisles, with two or three exceptions all the capitals are of that early Græco-Roman type which is found in the great archway, and which was only superseded by the Roman type at such places as Palmyra, Baalbec and Gerasa, and other towns, where the importance of the works caused stone-masons from Rome to be sent over. The dosserets are all absolutely the same form as those existing in the great court, which have never suffered since their first erection. The only exceptions are the capitals above the tomb of St. John, which is placed between the third and fourth columns of the south side of the nave, and east of the transept; and as there has probably always been a rich wooden structure of some sort over this tomb, the burning of this probably destroyed the original capitals here. The amount of timber also in the roof burnt in 1893 must have been two or three times that of the original flat roof; and as of late the floor was always covered with carpets placed one over the other, possibly to hide a much damaged pavement, this must have rendered the last conflagration more serious, in that nearly the whole of the arcades separating the aisles were thrown down. It is probable, therefore, that the arcades now destroyed belong to the original construction of the Mosque. It is true that one of the Moslem authors records that a certain writer of past times states that the Mosque was originally built with two rows of marble columns, one above the other, the lower row being large columns, and those above smaller; but the columns would be too far apart to carry architraves; and besides, the arcades or columns and their openings above are absolutely similar to those of the great court built by Al Walid.

*** **The remainder of the Paper, with further illustrations, and the discussion thereon, will appear in the next number.**

9, CONDUIT STREET, LONDON, W., 19*th November* 1896.

CHRONICLE.

Mr. Phenè Spiers's Paper.

Limitations of space compel postponement of publication of the remainder of Mr. Spiers's Paper on the Great Mosque of Damascus, with the interesting discussion which ensued, until the next issue of the JOURNAL. The Paper, with the author's lucid explanations of the illustrations, took over an hour and a half to deliver. Among the audience were several who had visited Damascus, and were familiar with the Mosque before the fire of 1893. The visitors included Miss Rogers, the sister of a former Consul in Damascus, and the author of many works on Palestine; Mr. Holman Hunt, who proposed a Vote of Thanks to the author of the Paper; Colonel Watson, who, in seconding the Vote, displayed an intimate acquaintance with the Mosque, and contributed very ably to the discussion; and Mr. Henry C. Kay, who also took part in the discussion. Other speakers were Colonel Lenox Prendergast [*H.A.*] and the President. The Paper was illustrated by a large number of drawings and photographs. The former included one by Mr. Carl Haag made in 1859, and three or four water-colour drawings made by Mr. Spiers a few years later; also many drawings of the inlaid marble slabs with which the lower part of the walls and piers were covered. The photographs included two large panoramas of the Mosque taken from the Minaret of the Bride, and views of the exterior and interior of the Mosque and of the great court; details of the Syrio-Greek tower, of the Great Gateway, of the Roman doorway on which the Greek inscription is carved, and of the bronze doors now destroyed. The most interesting photographs perhaps were those taken after the great fire, lent by Dr. Wright, for whom they were made, and which show the completely ruined condition of the building. Besides these were plans, elevations, and sections of the whole structure worked out from photographs and drawings, and based on the measurements made by Sir Charles Wilson.

Proposed Government Buildings, Jamaica.

Conspicuous among the notices in the *Supplement* to the JOURNAL of the 15th ult. was a paragraph with the above heading, stating that the President had been requested by the Secretary of State for the Colonies to nominate three or four architects of good reputation, who would undertake to prepare designs, working drawings, specifications, and estimates for public buildings proposed to be erected by the Government at Kingston, Jamaica. The paragraph concluded with an invitation to architects desirous of being nominated to send in their names, with particulars of their work and experience, to the Secretary of the Institute before the 24th ult. In response, thirteen applications were received, twelve of them being from members of the Institute. The qualifications of the various applicants were duly considered at the Council meeting of the 2nd inst., and a selection made of the following gentlemen, whose names have been forwarded to the Colonial Office: Mr. Frank T. Baggallay [*F.*], Messrs. Gibson [*A.*] & Russell [*A.*], Mr. W. H. Harrison [*F.*], and Mr. Beresford Pite [*F.*]. The architect ultimately selected from among those nominated will be required to visit Kingston, and attend the committee there with reference to the general plans and architectural character of the designs. He will subsequently be required to furnish to the Government full and detailed working drawings and specifications for the construction of the buildings. The remuneration will be at the rate of 2½ per cent. on the estimated cost, which is not to exceed £100,000.

The Preservation of London Monuments.

Some good seems likely to accrue from the recent demolition by the London School Board of the hunting-box of James I. at Bromley-by-Bow. This interesting relic, with its elaborately carved oak staircase and chimney-pieces, its sumptuous plaster ceilings and cornices, was ruthlessly swept away to make room for a Board school, and its costly fittings disposed of as old materials. With a view to prevent the possible repetition of such an act of vandalism, the London County Council has appointed a committee to consider what course of action the Council should adopt in the case of the proposed destruction of any building of historic or architectural interest in the county of London. As a first step the committee have invited the co-operation of several Metropolitan artistic and archæological Societies, including among others the Institute, the Architectural Association, the Society of Antiquaries, and the Society for the Protection of Ancient Buildings, in preparing a list of buildings in London it is considered desirable to preserve. A Conference of the various Societies with the committee of the London Council will take place on the 2nd prox., and it is hoped that a common course of action will be then agreed upon. Advantage may be taken of the present opportunity to congratulate the London Council upon the judicious manner in which it is dealing

with York Water Gate in the Embankment Gardens. The Gate is being put into a thorough state of repair under the personal supervision of the architect to the Council, and there is no intention of restoring or converting it into a triumphal arch, as was at one time contemplated.

The Dublin Architectural Association.

Ireland has long felt the need of a Society similar to those existing in London and other centres of the United Kingdom, which would take in hand the education and improvement of its young architectural students. It is satisfactory to learn that such an Association has at length been started in Dublin, mainly through the efforts of members of the Royal Institute of the Architects of Ireland. The objects are stated to be (1) to afford to pupils and younger members advantages of education beyond the daily routine of office work, on similar lines to the Architectural Association (London), viz., by classes of instruction, access to standard works of architecture, visiting buildings, old and new, and general social intercourse, and discussion; (2) to ensure a more general interest in architecture by means of occasional popular lectures and exhibitions. It is also hoped to institute a series of examinations, and to offer prizes for work done by the members. Membership is not restricted to those following architecture as a profession only; students in engineering or science and arts cognate to architecture are also eligible. There is no doubt that, with the co-operation and assistance of a few leading men, the new venture has every prospect of success. Mr. Thomas Drew [*F.*], R.H.A., President of the Royal Institute of Ireland, a Society allied to the parent Body in London, has entered heartily into the scheme, and, among other offers of assistance, has promised to form a Reference Library for the use of members, and to place a room at the disposal of the Association. Mr. William R. Gleave [*A.*] acted as Hon. Secretary of the Committee who made the preliminary arrangements.

The late Stephen Salter [*F.*].

Stephen Salter, who died on the 7th ult., at the age of seventy-one years, was the elder son of Mr. Stephen Salter, of Hammersmith. He was articled to the late Thomas Henry Wyatt, with whom he remained for many years as assistant. He commenced independent practice about the year 1866, subsequently establishing his office in Woburn Place, Russell Square. He had a large hospital connection, and carried out important works for St. George's Hospital, Westminster Hospital, King's College Hospital, and the Royal Colleges of Physicians and Surgeons. For the latter Body he built the Examination Hall on the Victoria Embankment. Among his other works were Lady Augusta Stanley's Nursing Home, The Mary Wardell Fever Hospital, East Moulsey Church; Christchurch, Hendon; St. George's Shelter for Girls, Berkeley Square; alterations to the Bristol Royal Infirmary, Malvern College, &c. For the last nine years Mr. H. Percy Adams had been associated with him in partnership. Mr. Salter was elected an Associate of the Institute in 1853, and a Fellow in 1866. He served for some years on the Practice Standing Committee.

The late William H. White, Secretary.

Sympathetic expressions of condolence with the Institute on the loss of its Secretary, the late Mr. White, have been received from the Architectural Association (London) and from various non-Metropolitan Societies allied to the Institute, in addition to those referred to at the Meeting of the 2nd inst. It should be stated that in the list of mourners present at Nunhead Cemetery given on page 17, omission was inadvertently made of the President of the Manchester Society of Architects, Mr. John Ely [*F.*], who attended the funeral as the representative of his Society. Members and other friends of the late Secretary will, it is hoped, endeavour to be present at the Special General Meeting of the 30th inst. The Meeting is convened for the purpose of inspecting the interesting collection of books, drawings, and sketches presented to the Library by Colonel White in fulfilment of his brother's wishes. The drawings, with others to be lent for the occasion, were the work of the deceased before he commenced practice. Many are of exceeding merit, and exhibit a skill and delicacy of treatment not often approached even in work of the kind in the present day. A selection of plans and working drawings representative of Mr. White's architectural works will also be exhibited, and a brief description given by Mr. Arthur S. Flower [*A.*].

New Hon. Members of the American Institute.

Two Past Presidents R.I.B.A. have been recently singled out for honours by the American Institute of Architects. At the Thirtieth Annual Convention of that Institute, held at Nashville, Tennessee, on the 20th, 21st, and 22nd ult., among the three Hon. Members elected were Mr. Penrose, F.R.S., and Mr. Alfred Waterhouse, R.A., LL.D.

Books received for Review.

A Handbook of Art Smithing, for the Use of Practical Smiths, Designers of Ironwork, Technical and Art Schools, Architects, &c. By Franz Sales Meyer. Translated from the second and enlarged German edition. With Introduction by J. Starkie Gardner. 8o. Lond. 1896. [B. T. Batsford, 94, High Holborn.]

Sanitary House Drainage: its Principles and Practice. A Handbook for the Use of Architects, Engineers, and Builders. By T. E. Coleman. 8o. Lond. 1896. [E. & F. N. Spon, 125, Strand.]

Constructional Iron and Steel Work as applied to Public, Private, and Domestic Buildings. A Practical Treatise for Architects, Students, and Builders. By Francis

Campin, C.E. Small 8o. 1896. [Messrs. Crosby Lockwood & Son, 7, Stationers' Hall Court, Ludgate Hill.]

The Buddhist Praying-wheel. A Collection of Material bearing upon the Symbolism of the Wheel and Circular Movements in Custom and Religious Ritual. By Wm. Simpson, R.I., F.R.G.S., Hon. Assoc. R.I.B.A. 8o. Lond. 1896. [Messrs. Macmillan & Co., 29-30, Bedford Street, Covent Garden.]

Additions to the Library.

Mr. Archibald M. Dunn has forwarded his *Notes and Sketches of an Architect*, a quarto volume consisting of a collection of facsimile reproductions by photo-lithography of sketches made some years ago both at home and abroad by Mr. Dunn. The drawings were all made on the spot, and mainly with the object of study: their publication, which occurred in 1886, was an afterthought.

Owing to the courtesy of Mr. Samuel Knight, a work of considerable bibliographical interest has come into the possession of the Library. This is the first edition, and the author's copy, of Britton's *Dictionary of the Architecture and Archæology of the Middle Ages*, interleaved and containing voluminous notes and additions in the author's handwriting, with a view to their being incorporated in a new edition. There are also references to contemporary criticisms, whose suggestions Britton intended to adopt; and to the inside cover of the first volume is attached a rather severe review which appeared in the *Spectator* of the 17th November 1838, with the reviewer's name inscribed on the margin. The work derives additional interest from the fact of its possessing early proofs of Le Vieux's fine plates. Mr. Knight purchased it from Salkeld, of Orange Street, by whom it was bought at the sale of Britton's effects after his death.

Bautechnische Studien anlässlich des Laibacher Erdbebens, a lecture delivered by Adalb. G. Stradal before the members of the Engineering and Architectural Society of Austria on the 8th of last February, has been received from the author.

Mr. George H. Bibby has presented copies to both the Loan and Reference Collections of his *Planning of Lunatic Asylums* [London: B. T. Batsford].

The *Architekten-Verein* of Berlin has forwarded its *Entwürfe* for 1896, containing ten plates of designs by members of the Society, under whose direction the publication is issued. The designs include a town hall, country house, mausoleum, with plans, elevations, &c., and three designs of a diploma-form for the Society. The same Society has also presented the text and plates of the *Zeitschrift für Bauwesen* (vol. xlvi., parts x. to xii.), published under the direction of the Ministry of Public Works. Plans, &c., and a description of the central prison for the province of Posen, the construction of the Kaiser-Wilhelm canal, and various buildings are among the contents.

The thirty-seventh part of *Afbeeldingen van oude Bestaaende Gebouwen*, a collection of plates of ancient buildings, with descriptive notes, published by the Maatschappij tot Bevordering der Bouwkunst, Amsterdam, has been received from the Society. The drawings illustrate doorways at Middleburg, the Hague, Utrecht, &c., and details of the interior of St. Jacob's Church, the Hague [The Hague: Mouton & Co.].

Deutsche Schmiedearbeiten aus fünf Jahrhunderten and *Geschmiedete Gitter des XVI.–XVIII. Jahrhunderts aus Süddeutschland*, bound together in one volume, have recently been added to the Reference Library. The examples, which are admirably reproduced in photogravure, have in both cases been selected and edited by Adalbert Roeper; while Hans Bosch, Director of the German Museum at Nuremberg, contributes a preface to each part. [Munich: Jos. Albert.]

A finely illustrated monograph of the interesting Renaissance building, *Il Palazzo dei Rettori* at Belluno, by M. Guggenheim, has also been added to the Reference Collection.

Amongst American periodicals recently received, the *Engineering Magazine* for October contains an illustrated article entitled "An Arraignment of American City Architecture," by E. S. Gardner; and the November issue of the same periodical, a Paper by Mr J. Beverley Robinson on "The Cantilever as applied to Building Construction." The principal contributions to the last three parts of the *Brochure Series of Architectural Illustration* (vol. ii., Nos. 2–4) are respectively, "The Small Churches of Normandy," "The North Porch of the Erechtheion," and "English Parish Churches"; and the illustrations from photographs accompanying these articles are all of unusual excellence. The *Architectural Record* includes in the contents of its last quarterly part (vol. vi. p. 1) an article on "Optical Refinements in Mediæval Architecture," by Wm. H. Goodyear. Mr. Barr Ferree writes on "French Cathedrals," and Mr. Alphonse de Calonne contributes an article on "Modern Hospitals in Europe," with plans, &c.

The Journal of Indian Art and Industry (vol. vii., No. 56) has been received from the publisher (Peckham: W. Griggs). This number contains in facsimile a richly decorated letter from King James I. of England to the Shah Abbas of Persia, with an explanatory note by F. C. Danvers. A second contribution, "The Tradition of Raphael in Persia," by C. Purdon Clarke, briefly explains that the term pre-Raphaelite may with almost equal appropriateness be applied to Persian as to European art; a change from conventionalism to naturalism, due to European influence, being noticeable in Persia during the same period. Mr. Clarke's Paper is accompanied by four coloured illustrations of portraits.

The Forty-third *Report* of the Department of Science and Art of the Committee of Council on

Education, with Appendices, and the *Supplement* to the same, have been added to the Library.

Parts iv.–vi. of *Der Formen Schatz* have been received from the Publisher through Messrs. Williams & Norgate [Munich: Georg Hirth]. This excellent publication maintains its standard of illustration, many of the plates (including some examples of ironwork) in these numbers having a special interest for architects.

REVIEWS. XLVIII.

(131)

DEIR EL BAHARI.

The Temple of Deir el Bahari. By Edouard Naville, D.C.L., Ph.D., Litt.D., Correspondent of the Institute of France, Fellow of King's College, London. Part I. Plates I.–XXIV. The North-Western End of the Upper Platform. Fo. Lond. 1896. [*The Egypt Exploration Fund, 37, Great Russell Street, W.C., and 15, Blagden Street, Boston, Mass., U.S.A.*]

This first part of a really splendid monograph is presented to the Institute by the Egypt Exploration Fund, the Committee of which has done doubly well in securing the services of so pre-eminent an Egyptologist as M. Edouard Naville, and in placing the results of his careful exploration before the world in so complete and worthy a form. It is not many weeks since the explorer himself laid before the Institute some account of the temple in question, its peculiar position, built on a series of three steps or platforms artificially constructed against the solid rock, the sanctuary being cut in the rock itself. Those who desire to understand the general position and character of this very remarkable monument will do well to turn to the JOURNAL of 17th September last, Vol. III. p. 544. M. Naville in that Paper points out that, besides being different from all other temples, it is the best specimen of "elegant" Egyptian architecture, as distinct from the "colossal," which appealed to a less cultivated admiration. In the monograph under notice are illustrated the details of the decoration of the building—details which once glowed with colour, and which are yet throughout their execution brimful of delicate and subtle art. Excellent as are the drawings by the two Messrs. Carter, neither they nor any drawings can fully express the delicate "modelling" in the Egyptian art representation of the best periods, nor the careful and intelligent execution of the colouring, even in the repeated hieroglyphic symbols. It is to be hoped that the Committee may be able to have a few portions of the details photographed to a large scale and in a carefully adjusted light, with the express object of showing the finish of the surface modelling. The lithographic plates are evidently most carefully and faithfully drawn, and justly render the spirited drawing of the originals. The coloured plates also exhibit care and the honest attempt to render the colouring as it now is without exaggeration. Unless, however, my own notes and memory are much at fault, the "toning down" of the colours has been in some parts carried too far. In the colouring of this period the blues have either remained very frankly of a cobalt blue tone, or they have occasionally changed in part to a "coppery" green, or they have perished and exposed the white ground. In these coloured plates the blues appear "sicklied o'er" with a dull green-drab tone, which I have never noticed, unless where a modern varnish has imprudently been used for their preservation. However, the limitations of the method of reproduction preclude absolute accuracy of colour; and it is clear that no pains have been spared to render this work a real and trustworthy record. Such a publication can hardly fail to draw to the Egypt Exploration Fund a large accession of members; and that this may be the case we must all wish, for M. Naville urgently represents the need for some protective steps being taken to guard the works themselves from destruction by exposure.

J. D. CRACE.

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PRACTICAL SANITATION.

Domestic Sanitary Drainage and Plumbing. By D. R. Maguire. Second Edition. 8o. Lond. 1896. [*Kegan Paul, Trench, Trübner & Co., 20–22, Charing Cross Road.*]

This is a work professing to be "Lectures on Practical Sanitation delivered at the Central Technical Institution, South Kensington"; but as it consists of a series of very long chapters, the lectures have presumably been amalgamated. This is a pity, for short chapters, such as the lectures probably were, are much more satisfactory, with each embracing a distinct portion of the matter to which a long series of pages is now devoted. The first chapter is interesting, as it gives an account of the plumber's craft in bygone times; and the second chapter also, as it deals with the educational methods at the present time, and gives the author's own ideas on the subject. Of course, he adopts a high standard of morality for the world of plumbers, and it is to be hoped a fair proportion will attain it. The work is distinctly useful in its way, though perhaps rather costly for the pocket of the plumber's apprentice. The illustrations are of the usual catalogue type, and would have been more useful if the maker's name had been put to each, together with a direct statement of the pros and cons as to the use of each article. A complete series of illustrations is given of the parts of a "Kelvin" tap, and high praise awarded the invention—a matter on which some may differ from the author, as in many instances in my practice I have found the tap leak badly after being a short time in use. Under the heading of

soil pipes, nothing appears to be said as to the usual weights for each diameter of lead. Indeed, the by-laws of the London County Council at present in force in the Metropolis are conspicuously absent, no single reference to them being made that I can find. Another curious item is the information given on page 135, to the effect that the portion of the house drain from the sewer up to the outermost wall of the premises "is generally provided, laid by, and under the direct control of, the sanitary authority"—the actual fact being, in London at any rate, that the owner pays the authorities for laying the drain and making the connection to the sewer, as they possess facilities for opening the roads, &c., which the owner does not; but the owner can decide the size, inclination, and direction of this portion of the drain, within the limits of the regulations in force, as much as any other portion of the house drainage. As to whether plumbers should be employed to lay drains is a moot point. Taken generally, the book is a useful one, and should prove of great value to the working plumber who will carefully study the various points discussed, and bring his practical knowledge to bear on the problems suggested. MAX. CLARKE.

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SUGGESTIONS IN DESIGN.

Suggestions in Architectural Design, prefaced with Thoughts on Architectural Progress. By John Cotton, F.R.I.B.A., Pugin Travelling Student and Medallist 1869 Large 4o. Lond. 1896. [*B. T. Batsford*, 94, *High Holborn.*]

Goethe's epigram, so true of all other works and words of men, is emphatically applicable to their architectural designs: "There be many echoes, but few voices." Of the numerous books on architecture published during our Victorian age, how few are even suggestive, much less directive! May it not be truly said of most of these books that they are not even entitled to rank as echoes, but only as echoes of echoes? Mr. Cotton's book, whatever else it may or may not be, is neither an echo, nor the echo of an echo, but a *voice*. No one opening the volume, and looking first at the designs, replete as they are with new ideas, would know, without some interpretation, quite what to think of them. The able draughtsmanship, and the familiarity with constructive principles and with architectural styles and details exhibited on every page, should at first sight warn the censoriously disposed critic that no 'prentice hand nor half-taught mind had left its impress there. A strange impress truly! Strange as an unknown tongue; and yet not wholly strange, but, as it were, a polyglot language, abounding in many familiar words and phrases—words from the Orient and from the still farther East, expressions Romanesque and Byzantine, dovetailed in with the fervid eloquence of the Moor, the homelier romance of Mediæval France and Britain, and the polished courtliness of the Renaissance.

In these remarkably unique designs Mr. Cotton has indeed given us a mixture of condiments likely to disagree with many an orthodox digestion, if dispatched too suddenly, without that preparation which the careful perusal of the author's explanatory preface gives, and without that rumination which naturally follows this perusal. In this well-argued and gracefully written preface Mr. Cotton interprets his "Suggestions in Design," giving a clear exposition of the principles upon which they are founded; and before proceeding to gauge the merits and demerits of the designs, the critic, in justice to both himself and the author, should carefully consider those principles, and either rebut them, or accord them their due weight in the scales of judgment.

Mr. Cotton contends that as new music can be composed, not by the impossible creation of new notes, but by new combinations of old notes; so new and original design in architecture can be made, not by inventing new shapes, but by forming new combinations of known shapes. He points out that the range of possible combination has been limited hitherto by allowing Archæology to usurp the place of Architecture, and that so long as what is mistakenly called "purity" of style and "period" continue to be insisted on, the architect is unduly fettered, and prevented from originating any new features which might develop into a new style. Certainly the insistence on archæological consistency of modern design has relaxed very considerably during the last decade; and many an architect to-day would say Amen to Mr. Cotton's contention who would have scouted it ten or twenty years ago. But it does not follow that every one who accepts the principle of free combination on which Mr. Cotton's designs are professedly based will necessarily fall in love with these designs, for they are greatly varied; and while the most fastidious taste would be likely to find amid such a hoard of new ideas some to be highly regarded, it would not be surprising if many others were set aside as unacceptable. At the same time these designs are so different from what we have been accustomed to criticise that it is highly probable no two critics would prefer the same designs, and that one critic would like what another would not like. We need always to distinguish between a principle and an attempt to exemplify it; for while the principle itself may be irrefutable, its example may be a failure, by reason of conditions for which the principle is not answerable. Mr. Cotton seems to realise this, and he modestly admits his consciousness of defect and demerit in his attempts to illustrate the principle of free combinations for which in his preface he contends.

The question, after all, is, Can various styles, periods, and fashions of architecture be so inter-

woven in modern designs as to develop a new and delightful series of architectural impressions? Or is there such vital incompatibility of temperament between the various old styles as to render a successful fusion impracticable?

It would be too much to expect of one man that he should conclusively answer so great a question. But Mr. Cotton's book has certainly stated the question with a force and directness which cannot fail to contribute very considerably to the final answer which will in due course be forthcoming, not from one man only, but from many minds converging to one course of principle and practice. Indeed already, while this author has been thus writing and designing, other architects, prompted by the same spirit of modern development which has inspired him, have very largely set aside archæological restraints—as witness the executed works of Messrs. Waterhouse, Collcutt, Aston Webb, and others, all stamped with the individualisms of their authors. Pieter Rodek's design (R.A. Travelling Studentship 1895) for a town church is another notable example of this; and in (R.A. Exhibition 1896) H. Wilson's Study for West Front of Proposed Church of St. Andrew's at Boscombe, we have a weirdly extraordinary and charming instance of the fusion of English Perpendicular with Egyptian Pylonic. Therefore, while we may regard this book as a *voice*, it certainly does not cry in an utter wilderness.

The principles advocated by Mr. Cotton do not require the architect who embraces them to embrace with them the Mediæval-Moorish blend, which seems to be the prevailing and favourite note of Mr. Cotton's published designs; and beautiful though many of these are, if regarded merely as designs in the abstract, they would perhaps have been welcomed more warmly a quarter of a century ago than now; for then the charms of "Queen Anne" had not succeeded in seducing enthusiastic Gothicists from their first love. Obviously, the architect of classic feeling and refinement could follow the principles our author espouses no less fully and freely than could the architect of Gothic fire and fancy; and which of the two in applying those principles would produce the more popular designs would depend not only on themselves, but also on the trend of public taste.

"Our little systems have their day: they have their day and cease to be." The day of the Gothic revival in this century has proved very short, and no one can say in what direction the next great architectural wind may blow. It may be that such a gathering together, as Mr. Cotton's work suggests, of all the forces of architectural thought and sentiment into one focus of modern design may issue in a resultant new style of greater force and beauty than any the world has seen yet. Meanwhile, the stickler for archæological propriety should not too eagerly cut down the young sapling because it forces aside the decaying branches of the mother tree.

The American architect is solving some of these modern problems in his own characteristic way. It is hardly likely that Europe will follow suit; though it must be allowed that the rock-faced, big-blocked granite basements, with their bold arches and more refined upper storeys, having carving of the very best sparsely applied, and roofs unaffectedly simple and picturesque, present in many cases architectural effects exceedingly novel, pleasing, and, from their great scale, even grand. There really are in this American development strong indication and promise of a new Transatlantic style, and about it there is a Doric sternness such as sometimes characterises great art. This sternness is conspicuous by its absence from Mr. Cotton's debonnair designs. But this seeming defect may be greatly discounted by the consideration that they are *designs* of details and parts, rather than *compositions* of whole buildings. The author himself anticipates criticism on this head. He says:—

> Evoked no doubt by the fussiness and want of unity so apparent in much modern architecture, a cult is springing up for the promotion of greater simplicity, and with its aim I am in perfect accord; yet I may be told that these suggestive sketches of mine are lacking in that very respect, and that they are too elaborate or over-ornate. To such an impeachment, if made, I would plead that I do not deny that simplicity is largely characteristic of good art, and that possibly some of the designs might be plainer with advantage, though if executed, and seen in their proper places in a building in connection with their usual wall-surfaces, the whole effect would not be unduly rich. None of the designs are more ornate than many similar subjects in old work.

No doubt the elaborateness of effect is partly due to the drawings, so conscientiously showing every joint and detail; and in execution this elaborateness would be greatly tempered not only, as the author says, by the contiguous spaces of dead wall, but also by the monotone of material, and by the subduing influence of shade and shadow.

Some of the designs are exquisite as a strain of Mozart. A building having one doorway or window, such as those suggested by this book, could well afford to be otherwise little else than a mass of plain walls and roofs, for one feature of the kind would give the building an artistic interest and distinction denied to many a more pretentious edifice.

In choosing subjects for the designs which illustrate the suggested new departure, Mr. Cotton has for the most part contented himself with doorways, windows, gables, chimneys, and woodwork for dwelling-houses, and also some new traceries and treatments for church windows and church column caps, gates and gateposts, tombstones, shop-fronts, and, last but not least, a few extremely beautiful towers.

It has been urged that in this choice of subjects our author has begun his enterprise at the wrong end; and that he ought to have produced, as illustrations of the proposed new development, not designs for particular features and details, but for buildings complete—as, for example, a design for a brewery or theatre. But this contention seems to have no historical warrant; for those remarkable developments of old-world architecture which distinguished Mediæval cathedral from Greek and Roman temple were not due to any sudden proposal to cease building Parthenons and commence building complete minsters. The great change did not come that way at all; but by variations in the treatment of small details, little by little, line upon line, the Doric order yielding to the Ionic or Corinthian, and the beam giving place to the arch, as slowly but surely the fashion of architecture passed from phase to phase in a long series of perpetual change.

By offering, as he has done, suggestions for new treatments of modern details, Mr. Cotton has certainly acted more in harmony with previous archæological developments than he would have done by putting forth a complete set of plans, elevations, and sections for a new brewery or theatre designed on a novel principle; and to complain of his method of procedure is no more reasonable than to have found fault with Callimachus when he produced his design for the Corinthian capital because he ought rather to have proposed plans for a novel kind of temple.

Mr. Cotton's book cannot fail to influence the thought of every architect who studies it. The principles it advocates may safely be left to work their own work in the minds of the younger generation of architects; and though it would be very deplorable if those who are unable or too inert to make their own designs were to make this book their free quarry (and the author intimates that that is contrary to his wish and purpose), and while some architects will perhaps learn no more from Mr. Cotton than that the Saracenic infusion is a comparatively unworked field, there will be other architects each of whom in his own way will give effect to the book by using in his own designs that principle of fusion and free but judicious combination of old styles which it advocates. Any startling development along this new line of thought and practice would naturally be resented by a public educated in the faith that "the thing that hath been is the thing that shall be." But by a gradual introduction of new and freshly beautiful combinations and treatments the public taste may be moved and eventually won to regard with pleasure the growth and blossom of a newly grafted stem on the grand old trunk of the world's architecture.

The book is handsomely printed, and while its great wealth of ideas and suggestions makes it specially valuable to architects, it is of such general interest as to be suitable for the private library of all concerned in art progress.

Sunderland. FRANK CAWS.

NOTES, QUERIES, AND REPLIES.

Remains of the Priory of Holywell, Shoreditch.

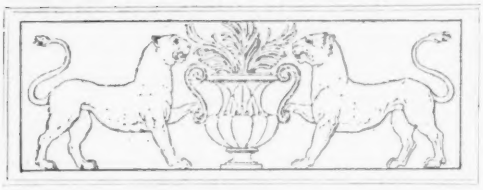
From HENRY LOVEGROVE [*A.*]—

A few months ago, while superintending some underpinning on or near the site of the Priory of Benedictine Nuns, not far from the Standard Theatre, Shoreditch, I discovered the remains of a massive stone wall, the material being similar to that used in Yorkshire. During the last few weeks an ancient well has been discovered under the pavement opposite No. 200, High Street, Shoreditch, a few yards from the before-mentioned wall. The well has brick sides, and is evidently of ancient date, the covering being a few feet only below the surface. Stow writes that the sweet, wholesome, and clear well was spoiled in his time by the manure heaps of the nursery gardens. That the well was used until a comparatively recent date is shown by the fittings found when it was opened. Until the dissolution there stood on this spot a Benedictine nunnery of St. John the Baptist, said to have been founded by a Bishop of London; and it is stated that in 1195 King Richard I. confirmed the grant to the nuns of certain lands by Galfridus and Melichas. The well gave the name to Holywell Lane, in which street lived and died Richard Burbage, the tragedian, who played the original parts in many of Shakespeare's tragedies. Two of the earliest theatres stood not far from this spot, or between it and St. Leonard's Church, then a building with four gables and a low square tower, more interesting than the present ugly structure designed by Dance in 1740.

The Galli-Bibiena Family [p. 23].

From JOHN HEBB [*F.*]—

In continuation of the note on p. 23 relating to this family, it may be noted that Ferdinando Galli-Bibiena built the Alberti Theatre at Rome, which is described as having had six tiers of boxes with an irregular and inconvenient curve. The length of the pit was about 55 Paris feet, and its greatest breadth 51½ feet. The theatre is further described in a document of about the end of the last century as having had miserable entrances, wretched staircases, impassable corridors, and the very worst situation. This theatre, which was the largest in Rome, was, together with the Tordinona and the Argentina theatres, built entirely of wood. Francisco Galli-Bibiena, brother of Ferdinando, also built the Teatro Filarmonico at Verona, under the direction of the Marquis Maffei. This theatre was very much criticised at the time it was built, but that was chiefly because it did not conform to classic models.



MINUTES. II.

At the Second General Meeting (Ordinary) of the Session, held Monday, 16th November 1896, at 8 p.m., Professor Aitchison, A.R.A., *President*, in the Chair, with 17 Fellows (including 7 members of the Council), 19 Associates, 1 Hon. Associate, and numerous visitors, the Minutes of the Meeting held 2nd November 1896 [p. 24] were taken as read and signed as correct.

The following members attending for the first time since their election were formally admitted, and signed the respective Registers—namely, John Tavenor Perry, *Fellow*; and Osborn Cluse Hills, *Associate*.

A Paper by Mr. R. Phenè Spiers [*F.*], F.S.A., entitled THE GREAT MOSQUE OF THE OMEIYADES, DAMASCUS, was read by the author, and, having been discussed, a Vote of Thanks was passed to him by acclamation.

The proceedings then closed, and the Meeting separated at 10.15 p.m.

LEGAL.

THE LONDON BUILDING ACT 1894.

District Surveyors' Fees.

LOVEGROVE *v.* ALLSOPP.

Mr. Haden Corser, the magistrate at Worship Street Police Court, gave judgment on Monday the 12th October in a case affecting Messrs. Allsopp, the well-known brewers, who were summoned in respect of certain fees claimed by Mr. Henry Lovegrove, District Surveyor of South Islington and Shoreditch, for surveying premises at Maria Street, Kingsland Road.

Counsel represented Messrs. Allsopp; and Mr. Hinton, solicitor, represented the London and North-Western Railway Company (owners of the premises). Mr. Lovegrove conducted his own case.

The premises in question are arches under the London and North-Western Railway, used by Messrs. Allsopp as stores for their ales, which are there racked off from barrels, which barrels are brought over the London and North-Western Railway from Messrs. Allsopp's breweries. The claim for fees was in respect of an addition to one of these arches; but Mr. Lovegrove had not discovered the new work until after it was completed, and then on claiming from the builder he found the latter had ceased his connection with the work. The claim upon Messrs. Allsopp was as occupiers under section 154 of the London Building Act 1894, Mr. Lovegrove admitting that he had not claimed from the owners, the railway company, as, not having received notice, he had no proof of ownership. The claim was resisted on two grounds: that the premises were part of the railway system, and exempt as being "used for the purposes of or in connection with the traffic of" the company (section 201); and (2) that the occupier was not liable for work done before he had taken possession.

The building in question had been erected on a piece of ground fronting Maria Street and adjoining the railway, and was included in the lease of the arch.

The learned magistrate, in a lengthy judgment, pointed out that the London Building Act, unlike the Metropolis Local Management Act, did not declare that any "future" owner or occupier should be liable for building fees, and said that if he were to decide—for that was what was asked by Mr. Lovegrove—that a "future" owner or occupier was liable, it would render a new purchaser liable for the payment of fees incurred, perhaps, ten years before. With respect to the contention that the premises were "used for the purposes of or in connection with" the traffic of the London and North-Western Railway, he (Mr. Corser) decided that they were not. It was true that the beers were brought in barrels over the railway named to the premises for Messrs. Allsopp; but were then stored by the latter to settle and fine, and afterwards bottled in the arches. If the railway company bottled the beers before delivering them to Messrs. Allsopp, it might have been held to be a part of their "traffic." The magistrate also remarked that the Act of Parliament made the difficulties in the way of giving the surveyor the fees for which he had worked, and having waded through the ill-digested Act he could only hope that if ever its amendment was taken in hand the assistance of metropolitan magistrates and some of the clerks would be asked for to explain how the Act worked.

The summons was dismissed.

Dangerous Structures.

This case, which came before Mr. Cluer at the North London Police Court on the 28th October, raised the question whether the dangerous structure provisions of the Act applied to premises which were alleged to be dangerous in the rear and in the interior (ceilings, &c.), and which were unoccupied. The case came originally before Mr. Bros on the 21st October, when objection to the proceedings of the London County Council was taken, and the magistrate adjourned the matter in order that case law upon the subject might be produced, and suggested further proceedings under the neglected structure provisions. On the present occasion it was agreed that Mr. Cluer should deal with the case, and the proceedings were commenced *de novo*.

Mr. J. W. Godfrey appeared for the London Council, and the owner was represented by Mr. Preston. The premises in question are situated at 130, Cassland Road, and Mr. Alexander Payne, the District Surveyor for South-east Hackney, gave evidence in support of his certificate of condemnation. He was not cross-examined, as Mr. Preston intimated that he should deal only with the point of law raised. He argued that as the house stood back from the road for a considerable distance, and was in its own grounds, and was unoccupied, it could not be a dangerous structure to passengers or inmates, as contemplated by the Act. If the Council had taken the proper proceedings, they would have instituted them under the neglected structure provisions, although he would not admit that the house in question was a neglected structure.

Mr. Godfrey contended that the case of *The London County Council* v. *Herring** made it quite clear that the Council's proceedings were regular, and urged that many persons might lawfully go on the premises, which were advertised to be let by means of boards which were in the grounds. He further pointed out the distinction to be drawn between the provisions dealing with dangerous structures and neglected structures.

Mr. Preston said that the case quoted supported his view, as the houses were occupied, and that that fact explained the Judge's ruling.

Mr. Godfrey replied that the houses were not all occupied, and, even if they were, it would not affect the general question, as a house occupied one day might be vacant the next, and *vice versa*.

After hearing the arguments, the magistrate decided in favour of the Council, holding that the premises were dangerous within the meaning of the Act, and he made an order upon the owner to do the necessary work.

* JOURNAL (1894), 3rd Series, Vol. I. p. 547.